

CLAIMS

We claim:

1. A recombinant DNA construct containing at least one transcriptional unit comprising a transcriptional promoter, a template sequence for making an RNA molecule, and a transcriptional terminator.
2. The construct of Claim 1, wherein a native Type I Pol III promoter is the initiating mechanism for transcription.
3. The construct of Claim 1, wherein an engineered Type I Pol III promoter is the initiating mechanism for transcription.
4. The construct of Claim 1, wherein a native promoter containing one or more essential elements of the Type I Pol III promoter is the initiating mechanism for transcription.
5. The construct of Claim 1, wherein an engineered promoter containing one or more essential elements of the Type I Pol III promoter is the initiating mechanism for transcription.
6. The construct of Claim 1, wherein a native promoter, which may initiate transcription by any mammalian or viral RNA polymerases, is the initiating mechanism for transcription.

7. The construct of Claim 1, wherein an engineered promoter, which may initiate transcription by any mammalian or viral RNA polymerases, is the initiating mechanism for transcription.

8. The construct of Claim 1, wherein said template comprising sequence for generating a full, or a part of, RNA molecule which will down regulate expression of a target gene through RNA mediated down regulation, including but not limited to RNAi.

9. The construct of Claim 8 wherein the target gene is a gene selected from the group consisting of the mammalian and viral genomes.

10. The construct of Claim 1, wherein said transcriptional unit is constructed with more than one other such transcriptional units in the same DNA molecule to target same or different region of a gene or genes.

11. A cloning or expression vector that contains the construct of Claim 1.

12. Molecules, cells, tissues, organs, organisms, or any other materials engineered, that contains the construct of Claim 1.

13. The construct of Claim 1, wherein said template comprises a sequence for generating a full or part of, RNA molecule which may bind its targets (e.g. DNA, RNA, proteins or any other forms of molecules) and regulate functions of these targets.

14. A method for making a gene suppression agent to be used in a eukaryotic cell, the method including use of a recombinant DNA construct containing at least one transcriptional unit comprising a transcriptional promoter, a template sequence for making a RNA molecule, and a transcriptional terminator.